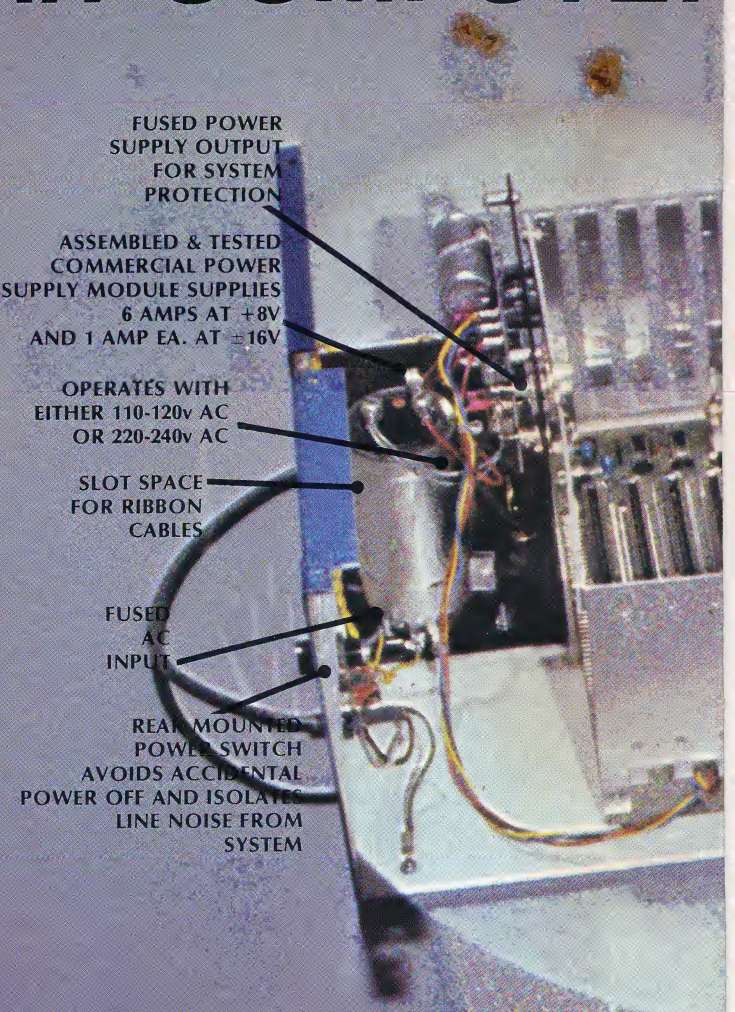
XITAN
TECHNICAL DESIGN LABS
COMPUTER SYSTEMS

XITAN COMPUTER

XITAN *alpha 1*

When we combined our highly praised ZPU board with our System Monitor Board, we defined the standard for the industry: we integrated more power and flexibility in two slots of our motherboard than most other systems can muster using five or more boards. When we put this setup into our rugged aluminum case we created the first XITAN system, the *alpha 1*. By adding a CRT terminal and/or teleprinter you will have a complete computer system.



XITAN *alpha 2*

By adding a Z16 memory module and our PACKAGE A software to the *alpha 1* we created a second XITAN system, the *alpha 2*. Thus assembled, a complete and extremely powerful microcomputer system emerges well worthy of you who are operating at the most sophisticated levels. The XITAN *alpha 2* provides you with 18K of RAM, 2K of ROM, 2 serial I/O ports, 1 parallel I/O port, our 1200 baud audio cassette interface as well as our extraordinarily powerful software package which includes 8K Basic, the Text Output Processor, the Zapple Text Editor and the Relocating Macro-Assembler. Add your own I/O device and GO... with the most powerful and flexible micro-computer package ever offered.

Z P U

The ZPU Card is a CPU module which features the Z80 Microprocessor produced by Zilog.

The Z80 offers you the greatest power of any micro: 158 instructions, 696 opcodes, 22 registers, single voltage power requirements and static operation allowing clock speeds from DC up to 4 MHz or greater.

Two clocks are maintained, one variable for fine tuning your system and one set for accessory cards requiring a 2 MHz signal.

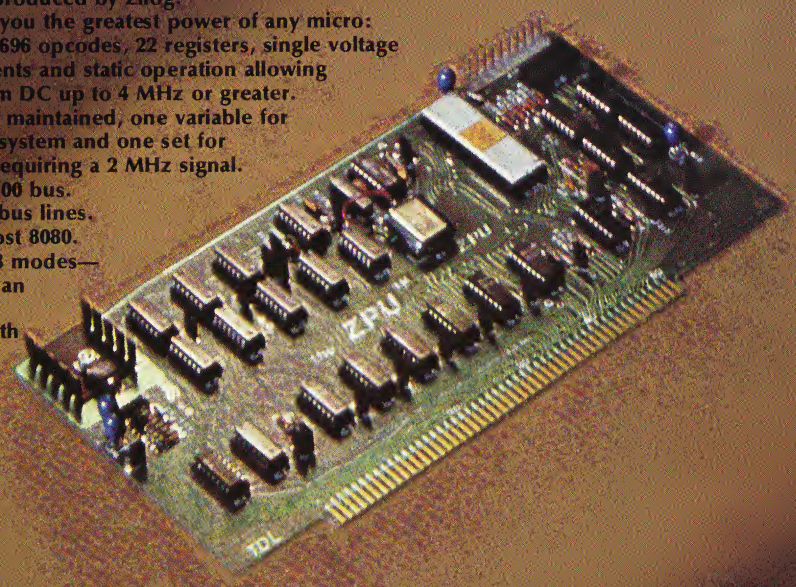
Utilizes the S-100 bus.

Fully buffered bus lines.

Runs Z80 & most 8080.

Interrupts: in 3 modes—up to 6x faster than 8080.

Included in both *alpha* systems



SYSTEM MONITOR BOARD

The SMB integrates fully the functions of 4 basic boards into a single module.

Adds unbelievable versatility and performance.

Maximizes user's system executive control.

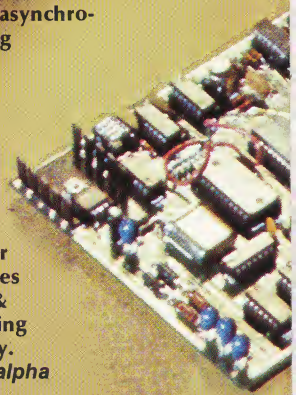
2 serial I/O ports (110-9600 baud EIA/20ma.)

1200 BAUD audio cassette interface-utilizes an asynchronous phase-encoding technique.

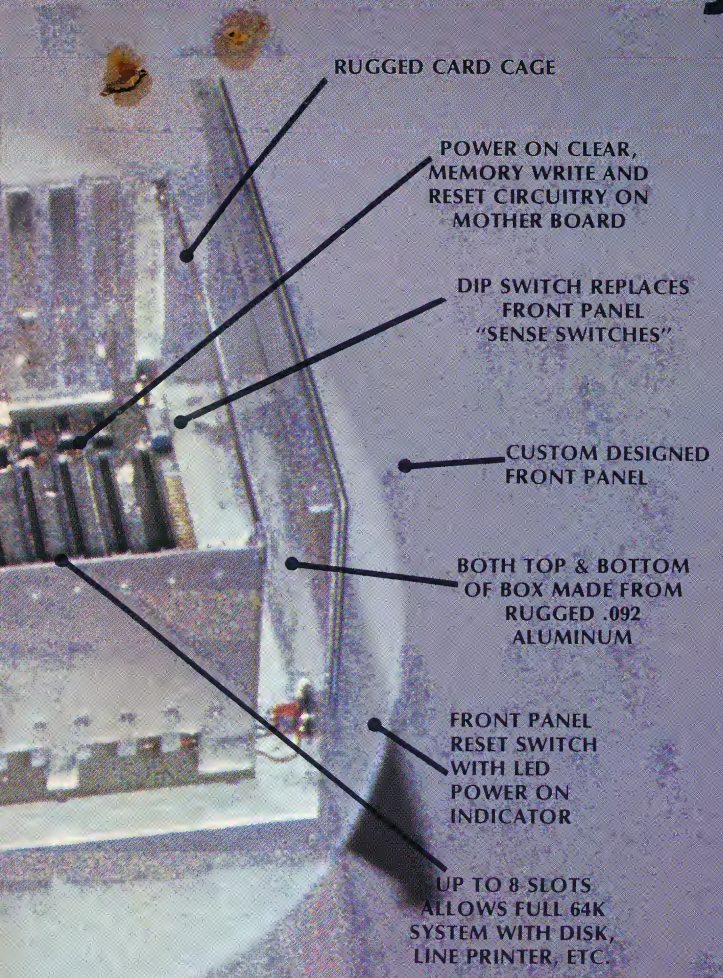
2K of high speed low power RAM (350ns, static) for monitor extentions and/or program work space.

2K Zapple Monitor in Masked ROM gives full system control & multiple breakpointing and debug capability.

Included in both *alpha* systems.



R SYSTEMS by



Z80 TECHNICAL DESIGN LABS

SOFTWARE SUPPLIED ON CASSETTE WITH THE XITAN *alpha 2* SYSTEM

ZAPPLE BASIC - 8K

The most complete and innovative 8K Basic interpreter written. Unique Features include:

TRACE: Allows switching among various line numbers during execution.

SWITCH: Allows switching among various I/O devices either in the program or from the keyboard.

RENUMBER: Allows upward or downward renumbering of the numbered line statements.

LVAR: Lists program variables and their values on your command.

LLVAR: Same as LVAR, but outputs the information to your hardcopy device.

EDIT: A unique feature in an 8K Basic. Allows you to change the internal structure of a line with the 'delete' command.

ZAPPLE BASIC is uniquely versatile and powerful and up to 20% faster than comparable Basics.

THE ZAPPLE TEXT EDITOR

This omnipotent tool gives you the ability to create or to change assembly language programs and to facilitate general word processing.

Text lines and characters may be located, inserted, deleted or changed at will in either forward or backward directions via a movable internal pointer.

Control may be effected by 24 alpha numeric commands which may be strung together in macro-like statements yielding superlative editing capability.

TEXT OUTPUT PROCESSOR

TDL's general purpose word processor for the Z80. Used in conjunction with the TEXT EDITOR and MONITOR, it occupies 3K of core and provides powerful word-processing capability.

TDL's TOP features automatic paging, concatenation and justification, as well as many other formatting functions.

Straightforward entry of the Processor's numerous commands directly into the text puts you in total control. The output from the Editor is then run through the Processor to produce output exactly as you have commanded.

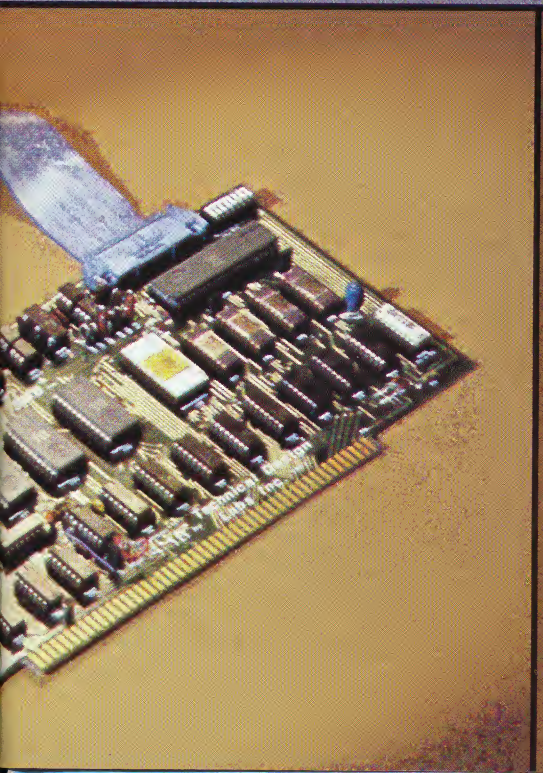
Imagination alone limits the possible applications of this word-processor.

RELOCATING MACRO ASSEMBLER

Here is the most sophisticated programming tool yet developed for a micro-processor. It is without equal in terms of number of functions, scope of capabilities and usefulness.

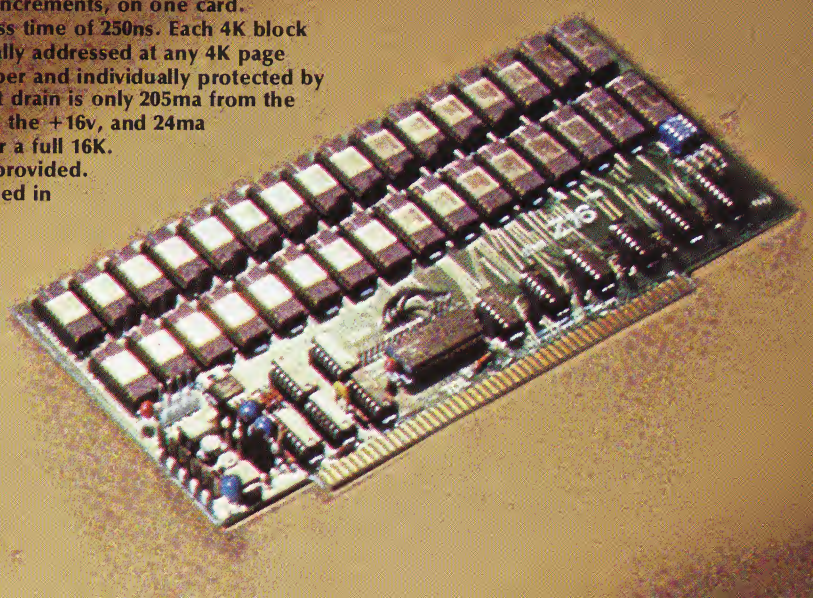
- It generates a fully relocatable object code.
- It has complete macro generation and infinite nesting of macros capability.

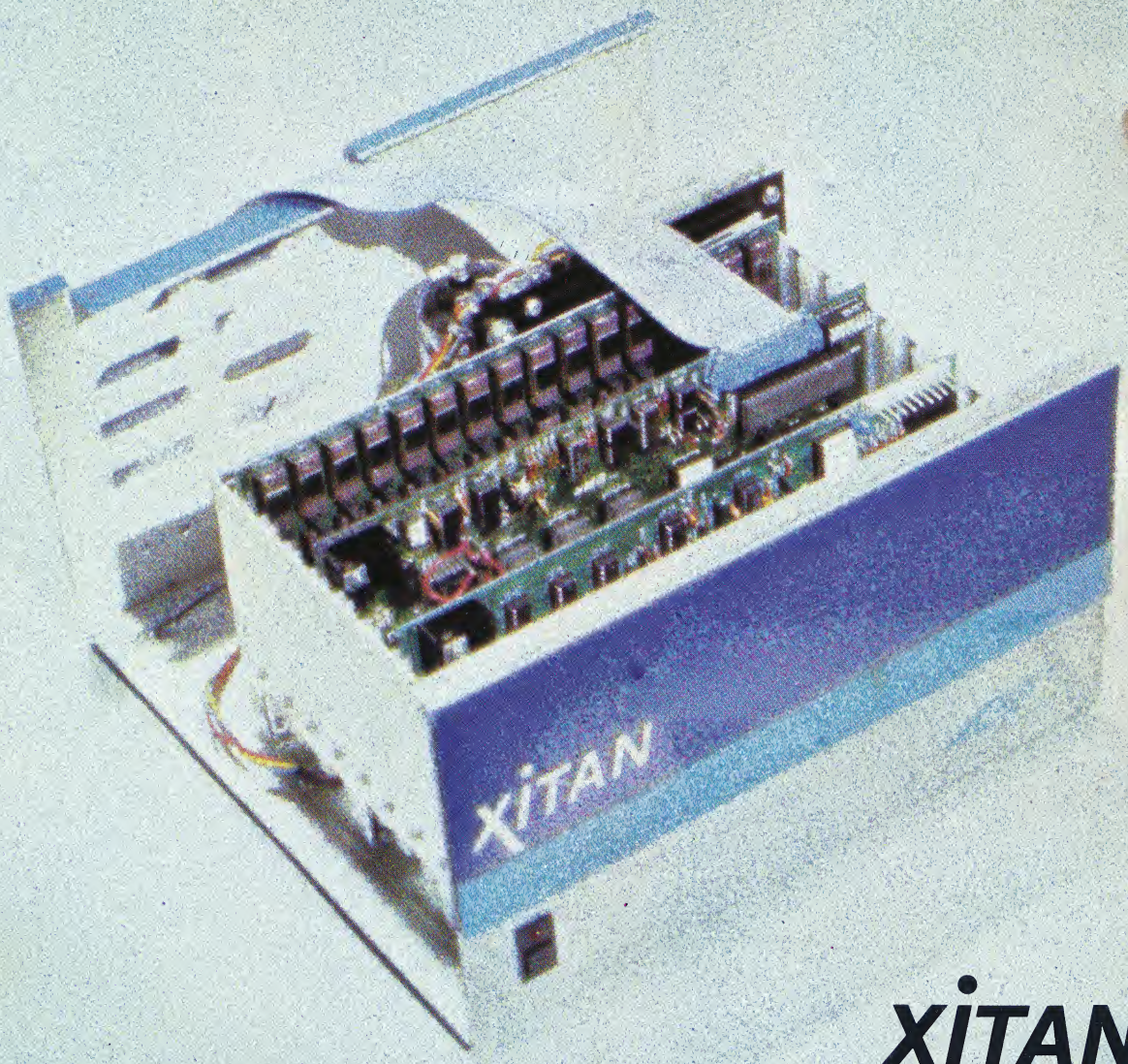
TDL's ingenious Z80 opcode set has as a subset the same opcodes as the 8080. Where other Z80 functions resemble 8080 functions, the TDL mnemonics are logically derived for ease of learning. Where our Z80 opcodes have no 8080 parallel, we generally use Zilog opcodes. Your current 8080 source can be reassembled with only nominal text editing.



Z 16 MEMORY BOARD

The Z16 memory module has the highest density fastest access, lowest power use, highest quality, greatest versatility of all available static modules. A full 16K in 4K increments, on one card. Total board access time of 250ns. Each 4K block may be individually addressed at any 4K page border by a jumper and individually protected by a switch. Current drain is only 205ma from the +8v, 105ma from the +16v, and 24ma from the -16v, for a full 16K. Test program is provided. The Z16 is included in the *alpha 2*.





XITAN

	ZPU	SMB	Z16	EXPANDABLE TO 64K	ZAPPLE MONITOR	ZAPPLE BASIC (8K)	MACRO ASSEMBLER	TEXT OUTPUT PROCESSOR	ZAPPLE TEXT EDITOR	COMMERCIAL POWER SUPPLY
alpha 1	×	×		×	×					×
alpha 2	×	×	×	×	×	×	×	×	×	×

Only the finest industrial grade components are used in all TDL products. Sockets are provided for all IC's, the pc boards are fully solder masked and silk screened. XITAN kits are accompanied by complete documentation including the Z80 CPU Technical Manual by Zilog and assembly listing of ROM Zapple.

Z80 TECHNICAL DESIGN LABS

RESEARCH PARK BLDG. H 1101 STATE ROAD
PRINCETON, NEW JERSEY 08540 (609) 921-0321

ORDER FORM for XITAN COMPUTER SYSTEMS

Please send the following system (check unit(s)):

☐ XITAN alpha 1 system ☐ Kit $ 769 ☐ Assembled and Tested $1039

☐ XITAN alpha 2 system ☐ Kit $1369 ☐ Assembled and Tested $1749

TOTAL AMOUNT OF THIS PURCHASE $ _____

(N.J. residents add 5% sales tax) $ _____

TOTAL PURCHASE $ _____

I wish to pay by ☐ Check ☐ Money Order ☐ American Express ☐ Bank Americard ☐ Mastercharge

Credit Card No. _____ Expires _____ Purchase Order _____

Ship to:

Mr./Ms. _____

Company _____

Street _____

City _____ State _____ Zip _____

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Z80

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